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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/913,670	08/17/2001	Gerard De Haan	PHNL000643US	4537

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS
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EXAMINER	
AN, SHAWN S	

ART UNIT	PAPER NUMBER
2613	

DATE MAILED: 02/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/913,670	DE HAAN ET AL.	
	Examiner	Art Unit	
	Shawn S. An	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 November 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3 and 5-7* is/are pending in the application.

4a) Of the above claim(s) *6* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,5 and 7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *12/12/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. As per Applicant's instructions as filed on 11/29/05, claims 1, 5, and 7 have been amended, claim 4 has been canceled, and claim 6 has been withdrawn.

Response to Remarks

2. Applicant's arguments with respect to amended claims have been carefully considered but are moot in view of the following ground(s) of rejection.

Furthermore, Applicant presents an argument of which the previously cited prior art references does not disclose or suggest "wherein of the selected parts, those parts of the image area in which motion was determined in previous video image data of a sequence of video images, are taken into account for determining the parameter sets".

However, after careful scrutiny of the prior art references, the Examiner must respectively disagree, and maintain the grounds of rejection for the reasons that follow.

In response, Chang et al teaches selecting a parts of the image area in which motion was determined in previous image data of a sequence of video images **(the previous revised region)** being taken into account **(feedback loop)** for determining parameter sets (Fig. 2; col. 3, lines 5166; col. 4, lines 1-61).

Moreover, the Examiner would like to request to the Applicant where exactly in the specification does an inventive feature of the amended claim limitation (as above) is described/explained.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumura et al (6,456,664 B1) in view of Chang et al (5,748,761).

Regarding claim 1, Matsumura et al discloses a method of motion estimation, comprising the steps:

selecting parts of an image frame in which a first video image is significantly distinguished from a second video image (abs.).

Matsumura et al does not particularly disclose determining in the selected parts in the first and the second images, and selecting a parts of the image area in which motion was determined in previous image data of a sequence of video images being taken into account for determining parameter sets.

However, Chang et al teaches determining parameter sets of at least two motion models in accordance with a selection criterion based on the selected block (Fig. 2, 12) (Fig. 2, 20), and selecting a parts of the image area in which motion was determined in previous image data of a sequence of video images **(the previous revised region)** being taken into account for determining parameter sets (Fig. 2; col. 3, lines 5166; col. 4, lines 1-61).

Therefore, it would have been obvious to a person of ordinary skill in the relevant employing the method for motion estimation as taught by Matsumura et al to incorporate the concepts as above as taught by Chang et al for determining parameter sets of at least two motion models corresponding to the selected parts in the first and the second images for a precise way to estimate each motion of the moving objects.

Regarding claim 2, Matsumura et al discloses dividing a current and a previous video image into respective pluralities of blocks, and evaluating deviations between the current and the previous image block by block, taking those blocks as the selected parts in which a value of the deviation exceeds a predetermined threshold value (Fig. 2; abs.).

Regarding claim 3, a threshold value is normally a predetermined value derived from a designer/user for filtering purposes.

Furthermore, since the predetermined threshold value has direct correlation with the selected part, which ultimately determines parameter sets based on the selected part, and based on the combination of references as above, it would have been obvious to one of a skill in the art to recognize the threshold being based on a condition of number of image areas taken into account for determining the parameter set being limited to a predetermined value as long as threshold setting basis enhances an efficiency of the motion estimation process.

5. Claims 5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al (5,748,761) in view of Matsumura et al (6,456,664 B1)

Regarding claims 5 and 7, Chang et al discloses a device for motion estimation in video image data, comprising:

a memory (Fig. 1) for storing a current (current frame) and a previous (previous frame) video image/frame; and

means (100) for block-wise evaluation of the deviations between the current and the previous video image, and means (Fig. 2, 10) for selecting a most homogenous block of the current and the previous video images after the value of a degree homogeneity for each block has been computed (col. 3, lines 23-67; col. 4, lines 1-24); and

means for determining parameter sets of at least two motion models in accordance with a selection criterion based on the selected blocks (Fig. 2, 20),

wherein in the determining means, of the selected parts, takes into account those parts of the image area in which motion was determined in previous image data of a sequence of video images **(the previous revised region)** for determining parameter sets (Fig. 2; col. 3, lines 5166; col. 4, lines 1-61).

Further, a digital memory is well known in the art.

Therefore, it would have been obvious to incorporate the digital memory for storing a current and a previous video image/frame.

Chang et al does not particularly disclose selecting those blocks of the current and the previous video images in which the value of the deviation exceeding a predetermined threshold value.

However, Matsumura et al teaches a method motion estimation comprising selecting those blocks of the current and the previous video images in which the value of the deviation exceeds a predetermined threshold value (abs.).

Furthermore, the Examiner takes official notice that a computer program product for performing motion estimation in video image data is well known in the art (see previously cited reference, Lee et al (5,933,535)).

Therefore, it would have been obvious to a person of ordinary skill in the relevant employing the device for motion estimation as taught by Chang et al to incorporate a computer program product for motion estimation performing all of the steps above for saving designing/manufacturing costs associated with the expensive hardware device and also incorporate the concept as above as taught Matsumura et al so as to select those blocks of the current and the previous video images in which the value of the deviation exceeds a predetermined threshold value, so as to determine parameter sets of at least two motion models in accordance with a selection criterion based on the selected blocks as an alternative efficient way to determine motion parameter(s).

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to *Shawn S An* whose telephone number is 571-272-7324.

8. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SHAWN AN
PRIMARY EXAMINER

2/02/06